

**AMENDMENT TO THE DRAWINGS:**

The attached Replacement Sheet 2/4 includes changes to Figure 2. Replacement Sheet 2/4 changes the arrowheads of the set of arrows 50 to illustrate mapping negative levels to levels inside a basic constellation.

Attachments: Replacement Sheet 2/4

## **REMARKS/ARGUMENTS**

The Applicant originally submitted Claims 1-40 in the application. In previous responses, the Applicant amended Claims 1-2, 5-6, 14, 17-18, 25-26, 28, 30, 39-40 and 49. Additionally, the Applicant added Claims 41-115 and canceled Claims 4, 27, 40 and 62 without prejudice or disclaimer.

In the previous Office Action, the Examiner indicated that Claims 18-24 are allowable and that dependent Claims 2-5, 7-13, 15-17, 26-38, 40, 50-52 and 54-62 would be allowable if rewritten in independent form. In the present Office Action, the Examiner has withdrawn the indicated allowability of Claims 2-5, 7-13, 15-17, 26-38, 40, 50-52 and 54-62 but has indicated that Claims 18-24, 42 and 65 are allowable. The Examiner has also indicated that Claims 49-61, 63 and 90-115 are allowable if rewritten to overcome §112, second paragraph, rejections. Additionally, the Examiner has indicated that Claims 2, 5-14, 26, 28-38, 45, 48, 69-76 and 81-86 would be allowable if rewritten in independent form.

In the present response, the Applicant has amended Claims 7, 25, 31, 33-35, 39, 49, 54-58, 61, 90, 96, 101, 106, 108 and 111. No claims have been canceled or added. As indicated below, the Applicant argues for the allowance of all currently pending Claims 1-3, 5-26, 28-39, 41-61 and 63-115.

### **I. Formal Matters and Objections**

The Examiner has objected to the drawings for not showing every feature of the invention that is claimed, illustrating that which is not supported by the specification and for not including the legend "Prior Art" with Figures 5 and 6. (*See* Office Action, pages 2-4.) In response, the Applicant has amended Figure 2 to illustrate mapping negative levels to levels inside a basic constellation.

Regarding Figures 5-6, the Applicant respectfully disagrees. Figures 5-6 do not illustrate only that which is old but include principles of the present invention. Figure 5 is a

block diagram of a decoder in accordance with the present invention and Figure 6 is a flow chart illustrating a decoding method in accordance with the present invention. (See page 5, lines 10-11 of the specification.) As an example of the present invention, the Applicant directs the Examiner to page 15, lines 22-27 for Figure 5 and to page 16, line 29 to page 17, line 5 for Figure 6. Accordingly, based on the above amendment and argument, the Applicant respectfully requests the Examiner to withdraw the objections to the drawings.

The Examiner has also objected to Claims 7, 9, 20, 22, 25, 31, 33-36, 39, 54, 56-58, 60, 72-73, 84-85, 92, 98, 103, 106, 108, 110 and 111 for including informalities. In response, the Applicant has amended Claims 7, 25, 31, 33, 35, 54, 56-57, 106 and 108 to correct the informalities. Accordingly, the Applicant respectfully requests the Examiner to remove the rejection of Claims 7, 9, 20, 22, 25, 31, 33-36, 39, 54, 56-58, 60, 72-73, 84-85, 92, 98, 103, 106, 108, 110 and 111 and allow issuance thereof.

## **II. Rejection of Claims 49-61, 63 and 90-115 under 35 U.S.C. §112**

The Examiner has rejected Claims 49-61, 63 and 90-115 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. In response, the Applicant has amended Claims 49, 58, 61, 90, 96, 101, 106 and 111. Accordingly, the Applicant respectfully requests the Examiner to remove the rejection of Claims 49-61, 63 and 90-115 and allow issuance thereof.

## **III. Rejection of Claims 1, 3, 15-17, 25, 39, 41, 43-44, 46-47, 64, 66-68, 77-80 and 87-89 under 35 U.S.C. §103**

The Examiner has rejected Claims 1, 3, 15-17, 25, 39, 41, 43-44, 46-47, 64, 66-68, 77-80 and 87-89 under 35 U.S.C. §103(a) as being unpatentable over TR-30.1/99-11-054 ("TR-30") in

view of U.S. Patent No. 6,198,776 to Eyuboglu, *et al.* The Applicants respectfully disagree.

In response to the Examiner's reliance on TR-30, the Applicant submits herewith an Affidavit under 37 C.F.R. §1.131 of the inventor and Exhibit A. Exhibit A is a true and correct copy of a technical paper submitted by the inventor with an invention submission form that is used in the regular course of business. The Affidavit and Exhibit A conclusively provide evidence that establishes the present invention was conceived before the priority date of TR-30 (November 29, 1999). Additionally, the Affidavit demonstrates diligence from conception of the invention to reduction to practice at the filing of the present application. As a result, TR-30 is antedated by the present invention. Thus, TR-30 is not a proper prior art reference.

Accordingly, the Examiner has not presented a *prima facie* case of obviousness of Claims 1, 3, 15-17, 25, 39, 41, 43-44, 46-47, 64, 66-68, 77-80 and 87-89. The Applicants, therefore, respectfully request the Examiner withdraw the §103(a) rejection with respect to Claims 1, 3, 15-17, 25, 39, 41, 43-44, 46-47, 64, 66-68, 77-80 and 87-89 and allow issuance thereof.


#### IV. Conclusion

In view of the foregoing amendment and remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-3, 5-26, 28-39, 41-61 and 63-115.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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Dated:

2/28/05

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